

MICROVACUUM FOR ASBESTOS FIBERS - ASTM D5755-95

Limitations

- 1.2.1 “...The standard test method specifically stated the collection efficiency was unknown and varied among substrates. The properties that influence collection efficiency included surface texture, adhesion, particle size distribution, etc.”
- 5.1.1 “This test method does not describe procedures or techniques required to evaluate the safety or habitability of buildings with asbestos-containing materials, or compliance with federal, state or local regulations or statutes. It is the user’s responsibility to make these determinations.”

The asbestos dust sampling and analysis procedures have not been adopted due to the lack of precision. Further, laboratories participating in the Environmental Laboratory Approval Program (operated by and under the jurisdiction of NYS DOH) are not accredited to perform dust sample analysis.

- 6.2.1 “Collecting any dust particles greater than 1mm size in this method may cause an interference and, therefore, must be avoided.”

The test method therefore required the collection of multiple independent samples from the same area. Quality control for analysis was based on reanalysis of the same samples due to difficulty in preparing quantitative asbestos samples.

Individuals are trained and certified for the collection of air and bulk samples. The training and certification requirements include units on hazard assessment, selection of sampling locations, and proper sample collection of air and bulk materials. Individuals are not uniformly trained or certified for the collection of asbestos dust samples.

Bulk sampling for asbestos containing material requires the collection of a sample about “the size of a penny”. Typically the microvac or wipe sampling methods are used in areas where amounts less than “the size of a penny” are present. Asbestos fibers are an inhalation hazard. If the amount of the sample is so small that one cannot even collect a bulk sample, what is the risk that asbestos dust may get dispersed in the air, elevate the asbestos concentrations and create health concerns?

- 5.1.2 “At present, a single direct relationship between asbestos-containing dust and potential human exposure does not exist. Accordingly, the user should consider these data in relationship to other available information in their evaluation.”

Recommendation

Collecting microvacuum and / or dust wipe sample for asbestos is not a good idea. The results and the interpretation will be inconclusive.